

Fig. 1 is a cross-sectional view of a multi-layered structure 60. The structure includes a top layer 61, followed by a series of alternating layers 62 and 63. A central layer 64 contains a circular feature 66. Below this is another layer 65, followed by a layer 67 with a circular feature 68. The bottom layer is 69. Various other layers and features are labeled with numbers 70 through 79.

FIG. 2A

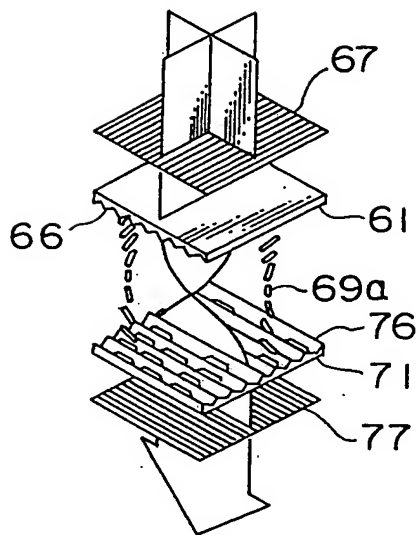


FIG. 2B

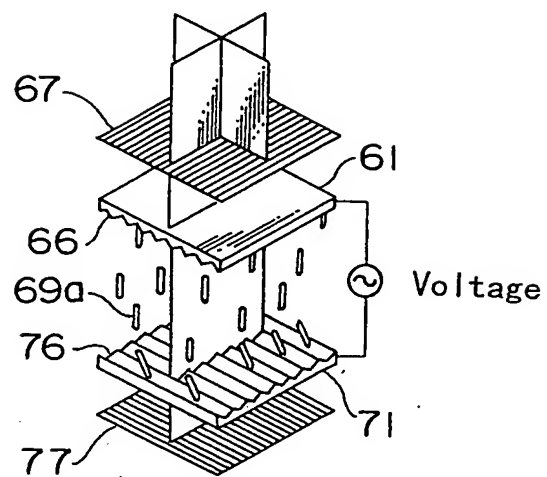


FIG. 3

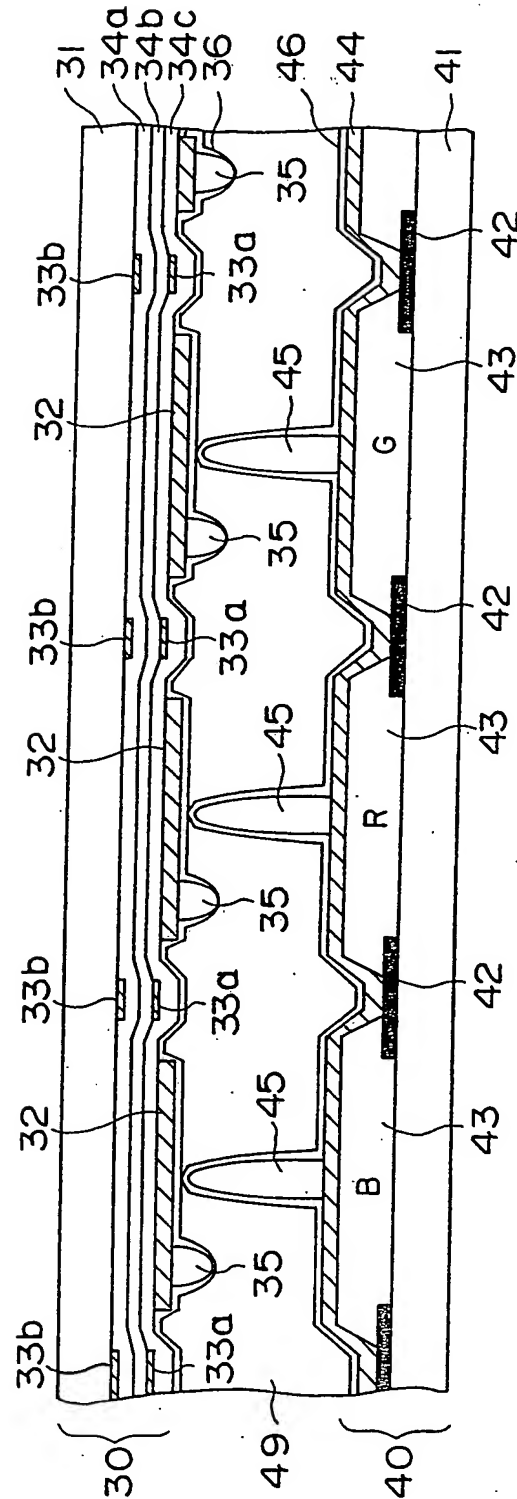


FIG. 4

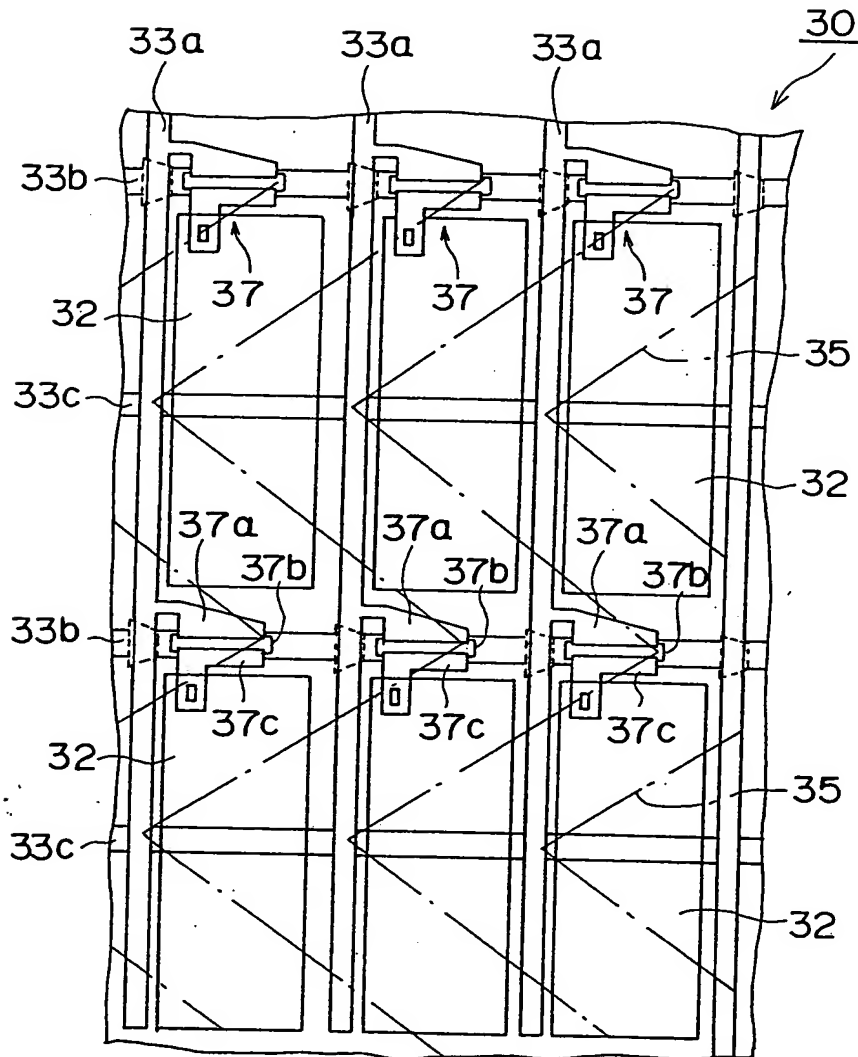


FIG. 5

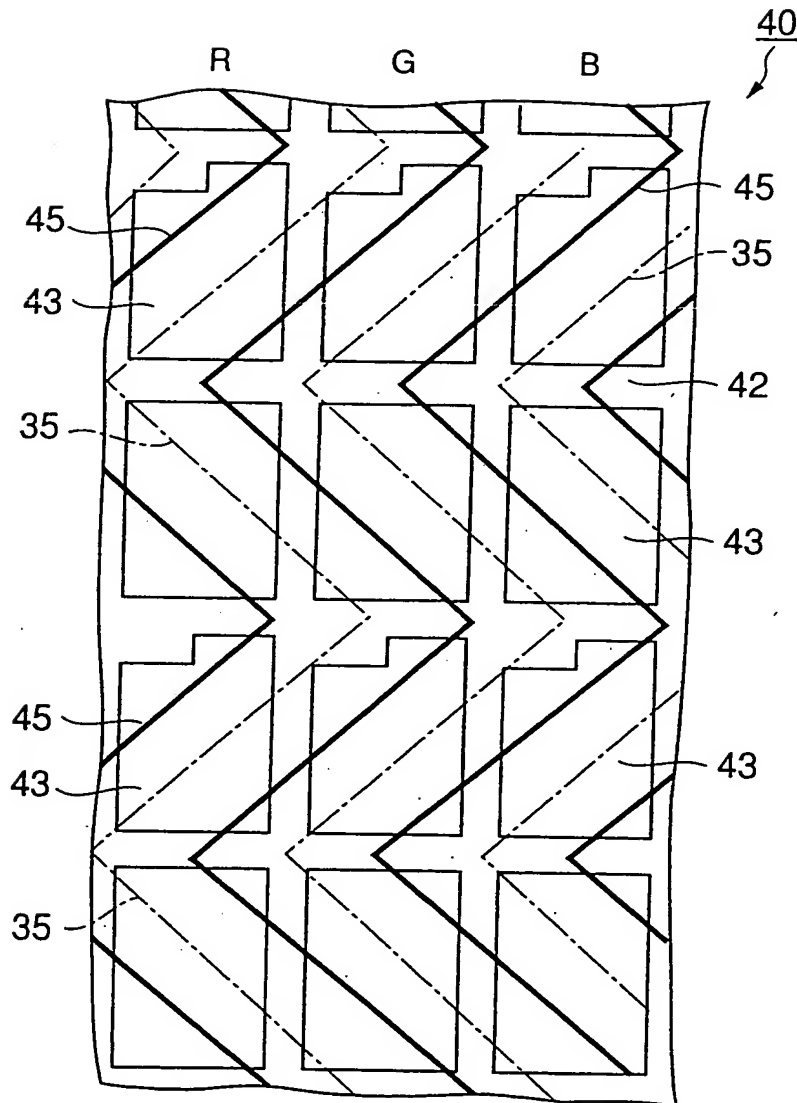


FIG. 6A

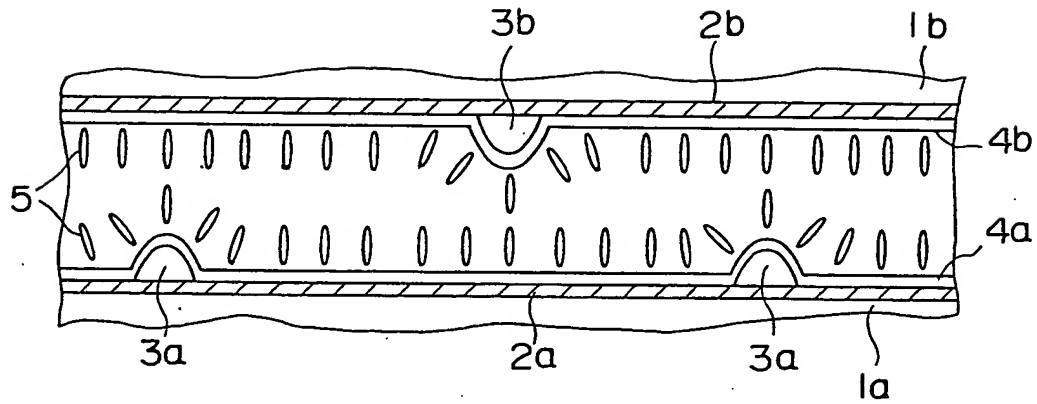


FIG. 6B

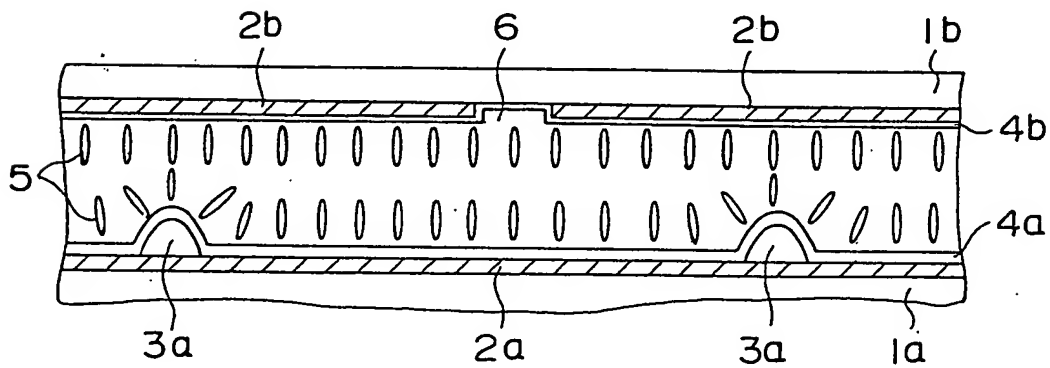


FIG. 7

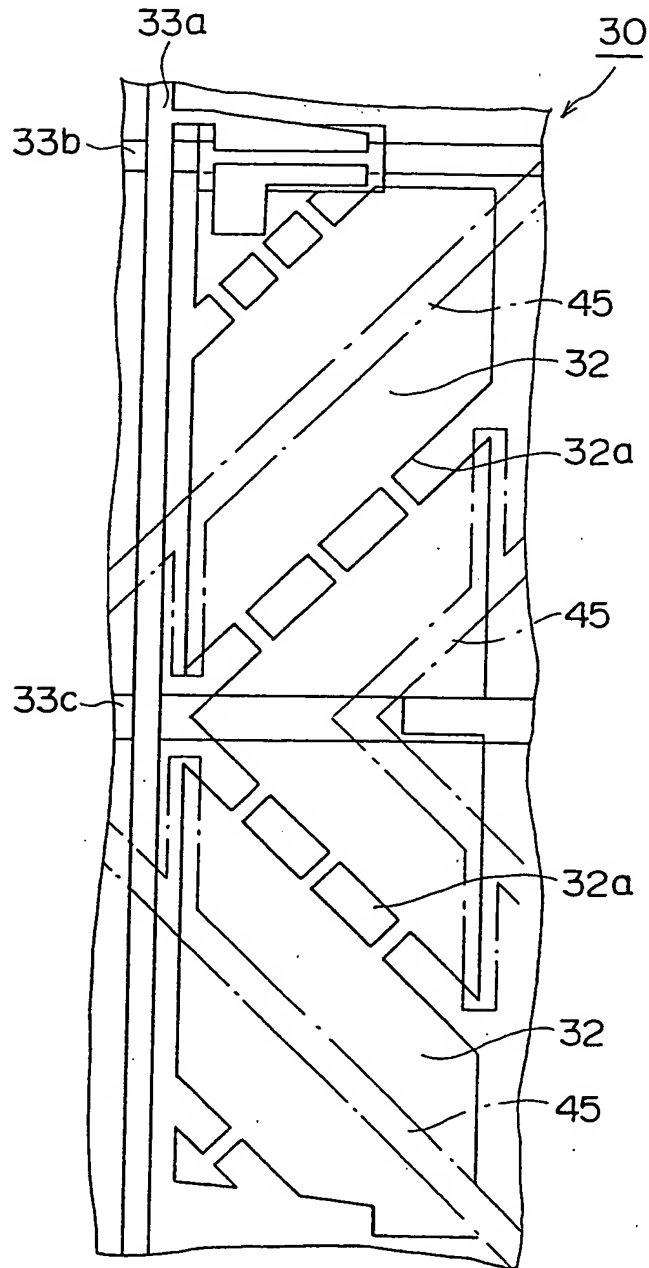


FIG. 8

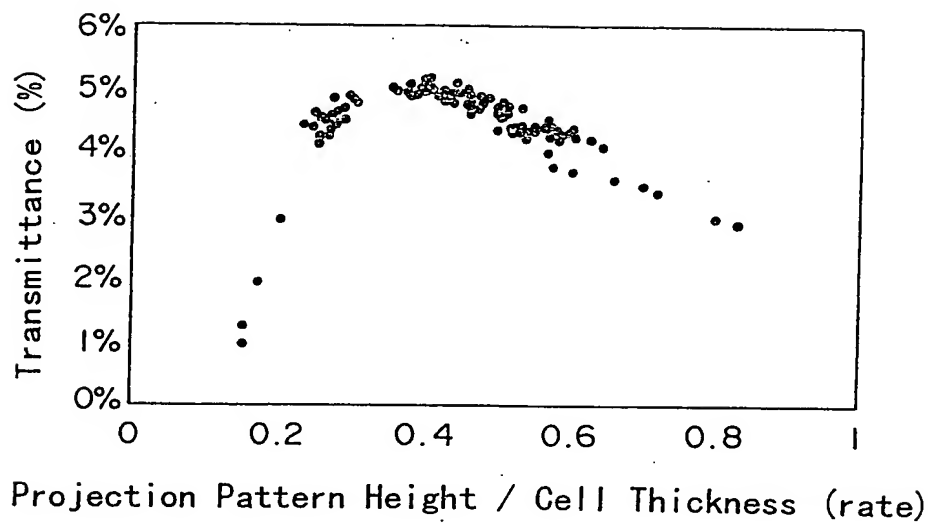


FIG. 9

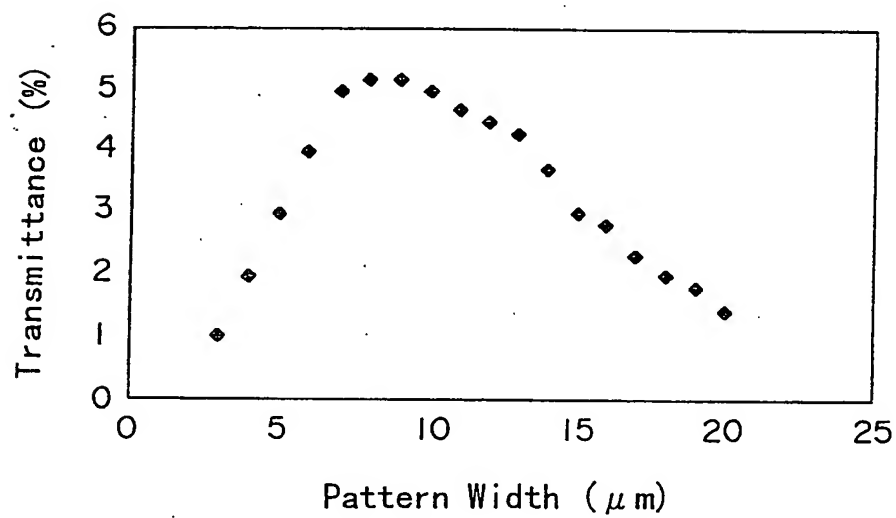




FIG. 10

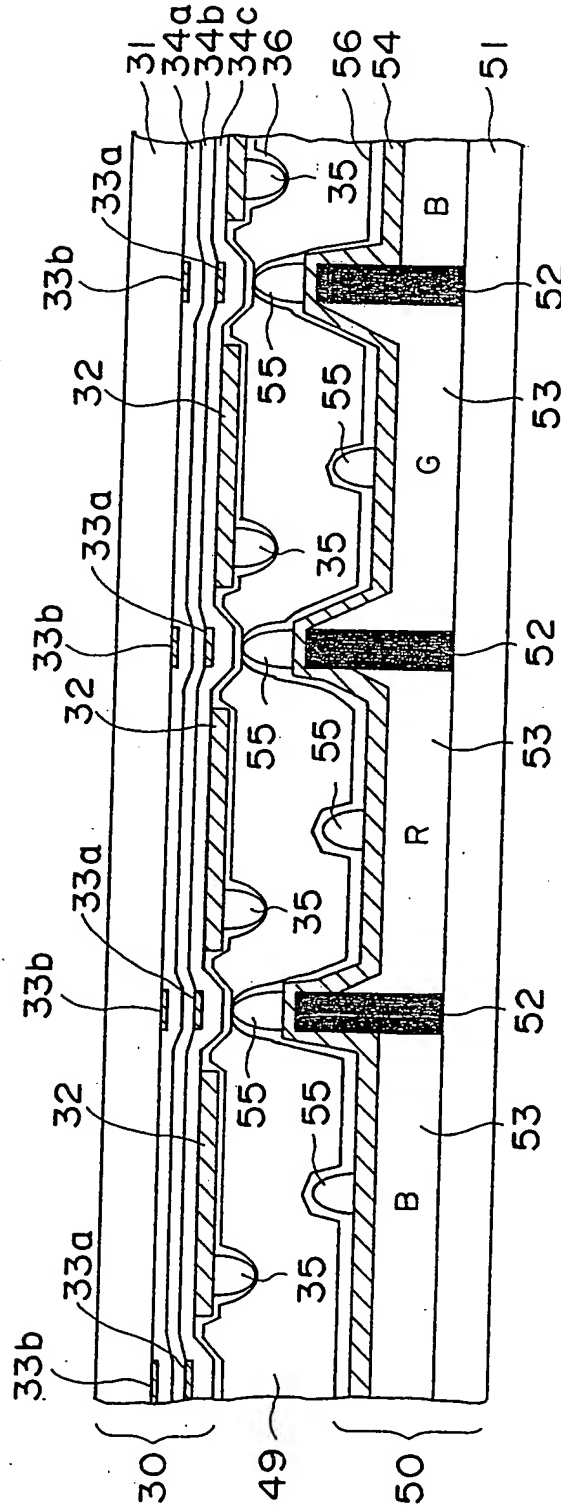


FIG. 11

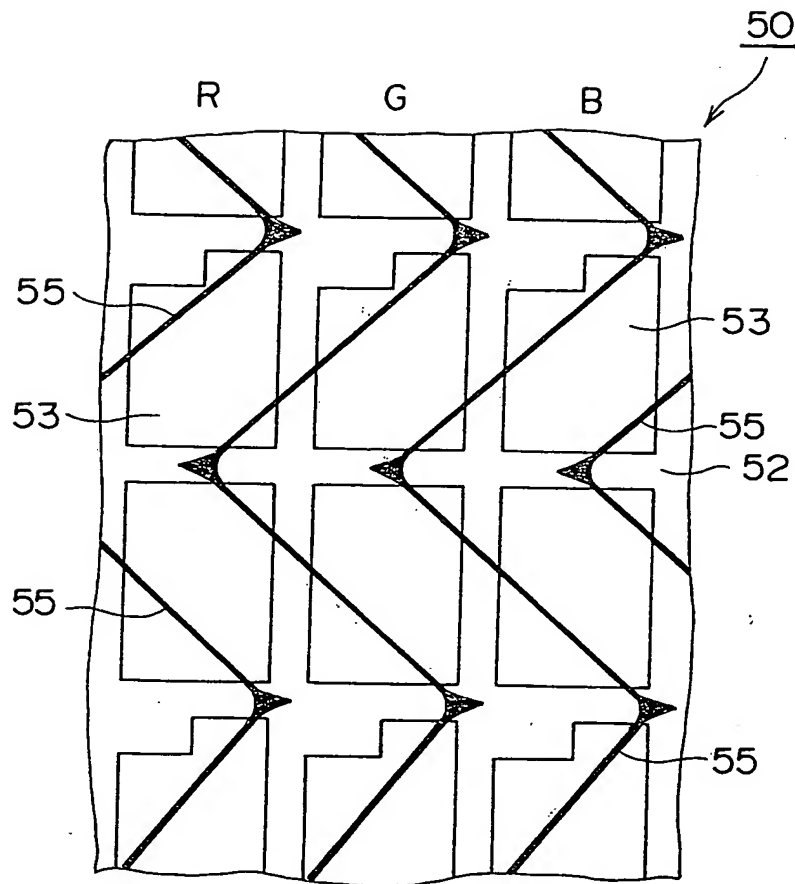


FIG. 12

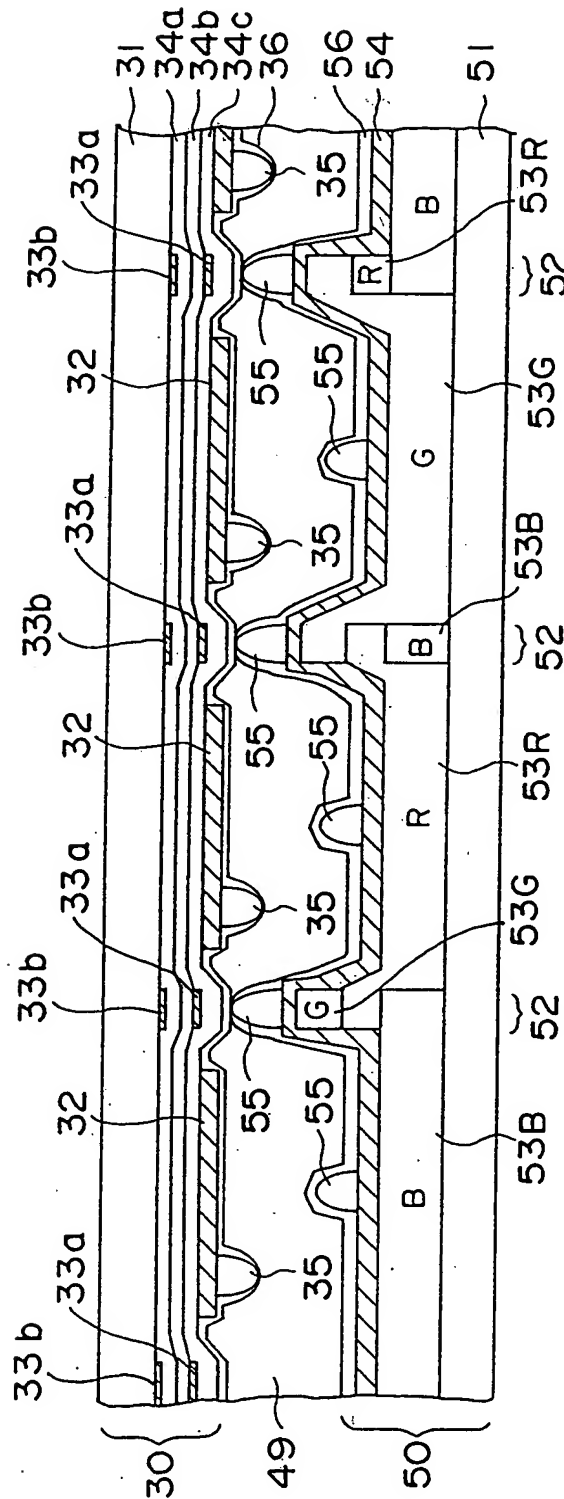


FIG. 13

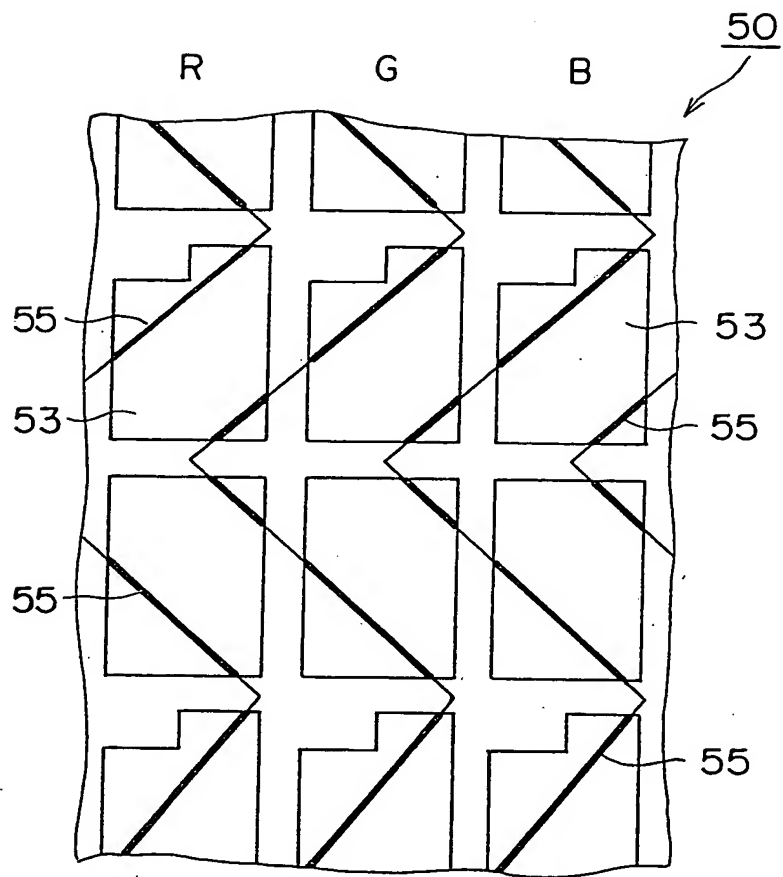


FIG. 14

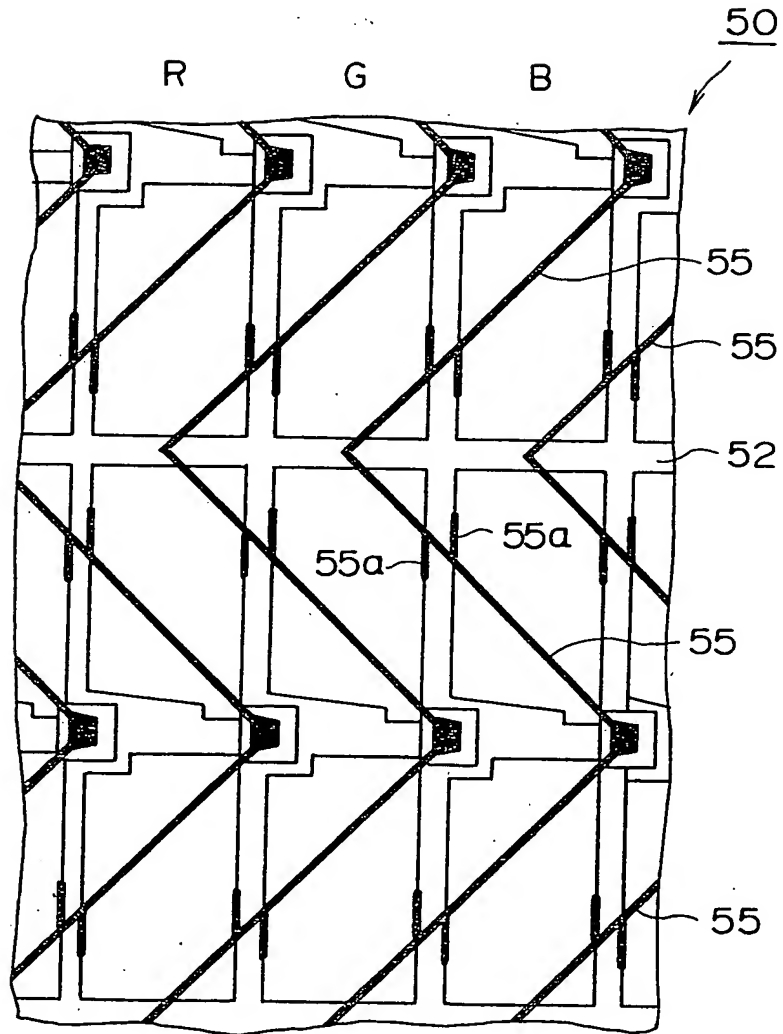


FIG. 15A

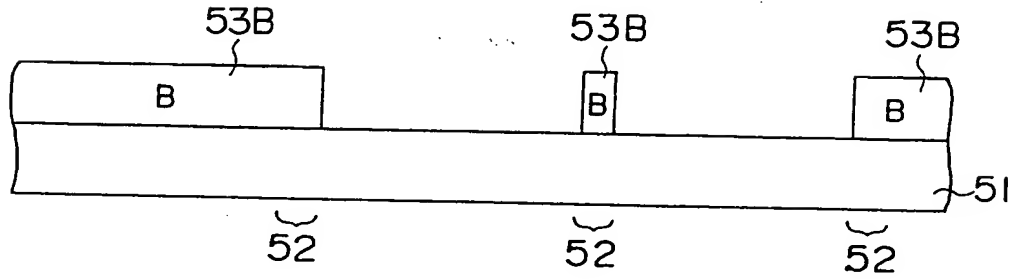


FIG. 15B

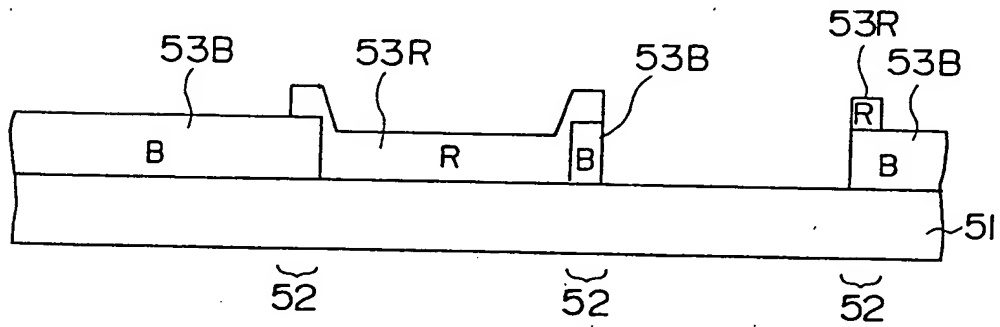


FIG. 15C

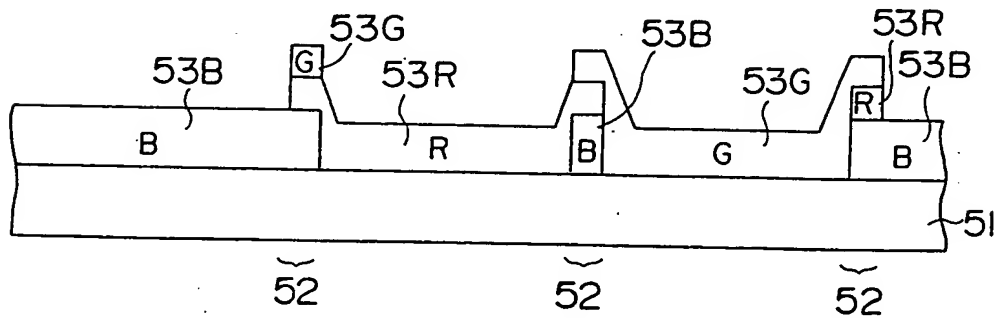


FIG. 15D

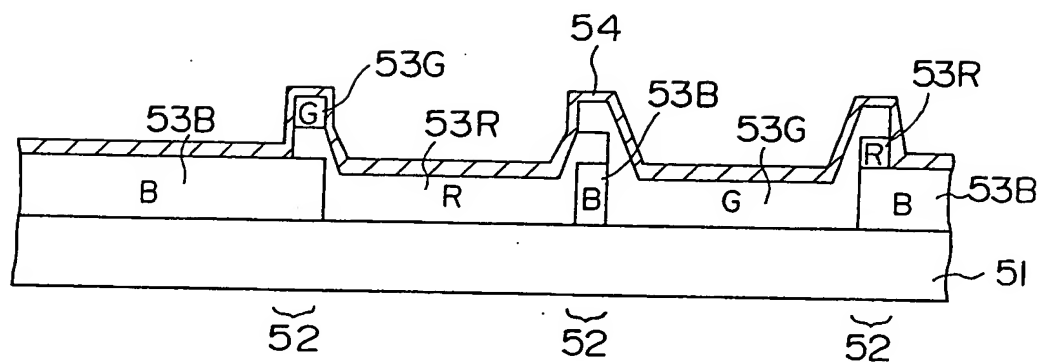


FIG. 15E

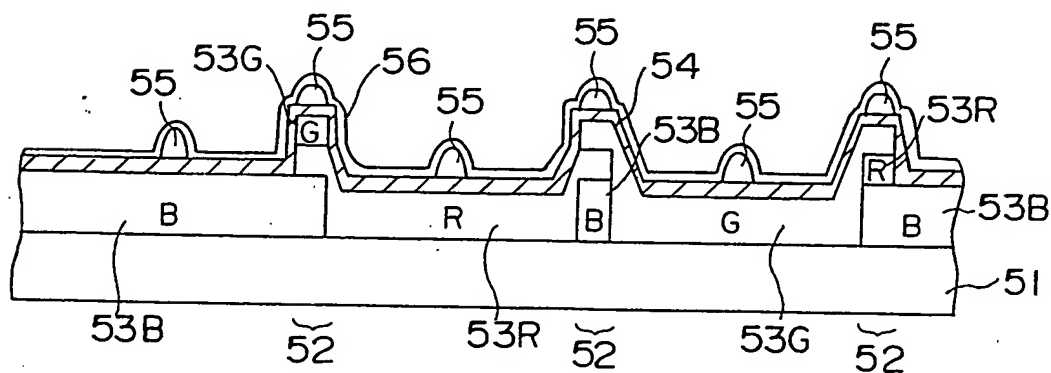


FIG. 16

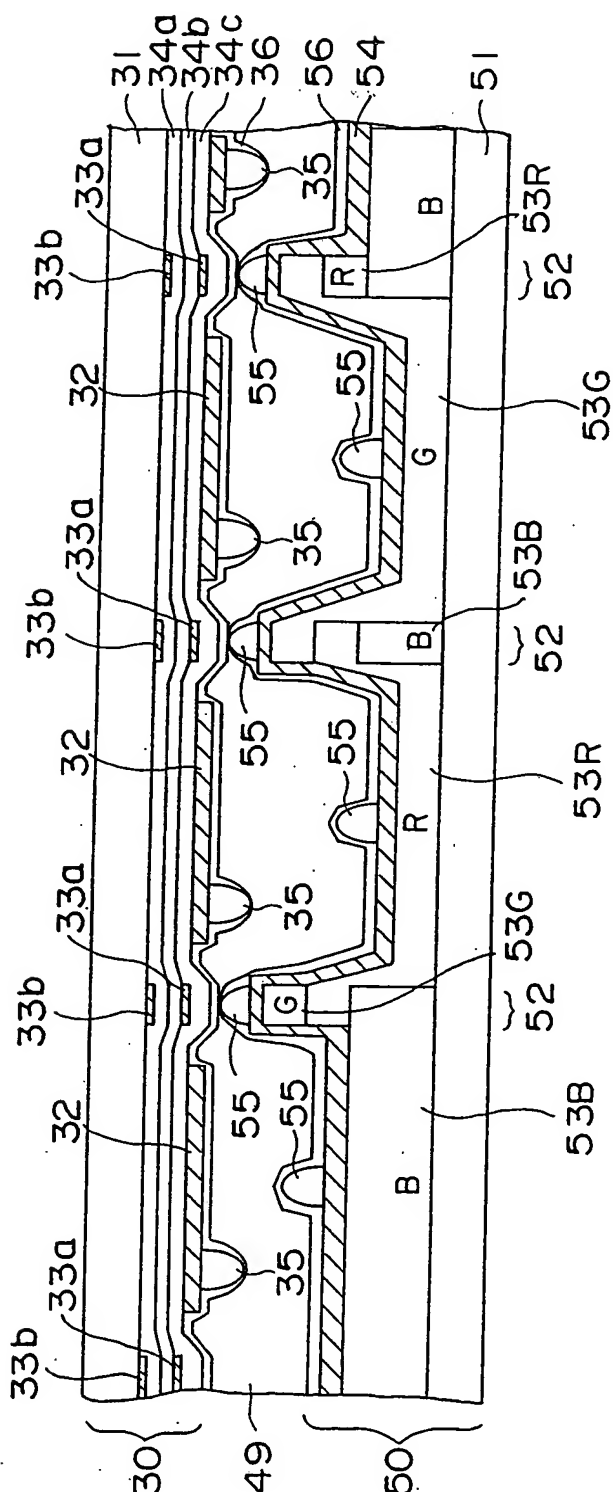
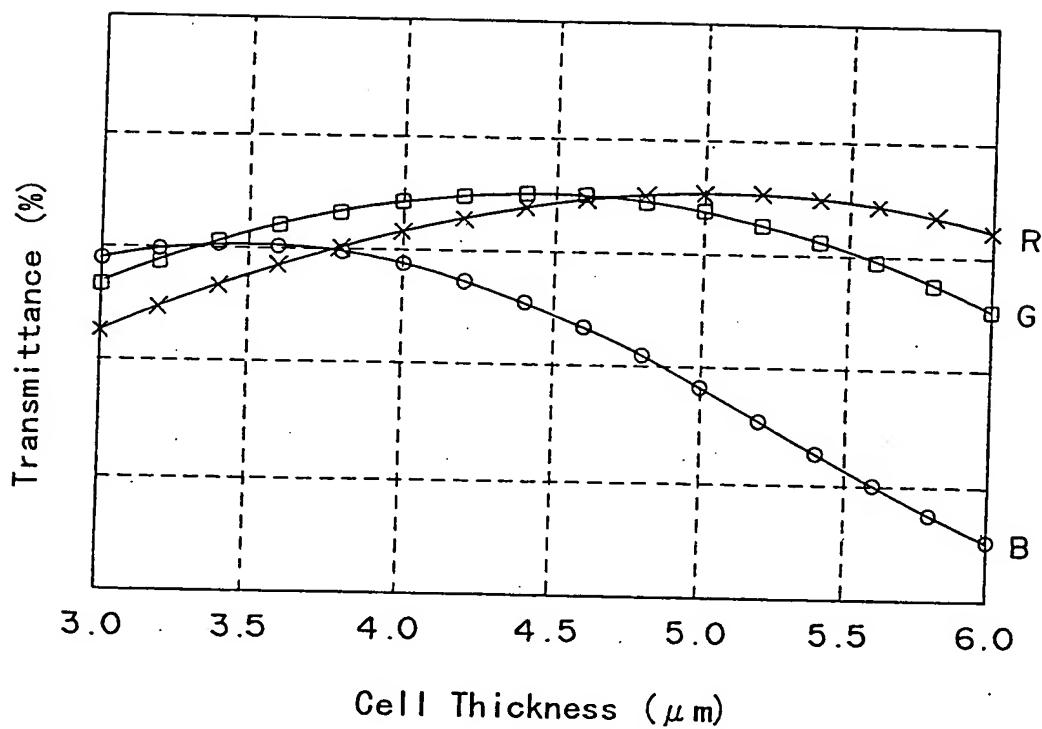




FIG. 17



This cross-sectional view shows a trench structure in a substrate 101. The trench is filled with a conductive material 115, which is surrounded by a dielectric layer 102. A gate stack 110 is formed on top of the trench, consisting of a gate dielectric 113G and a gate electrode 113B. A conductive plug 112 is formed in the trench, and a conductive layer 114 is formed on the top surface of the gate stack. A conductive layer 117 is formed on the bottom surface of the trench. A conductive layer 102a is formed on the bottom surface of the trench, and a conductive layer 115 is formed on the side surface of the trench.

FIG. 19

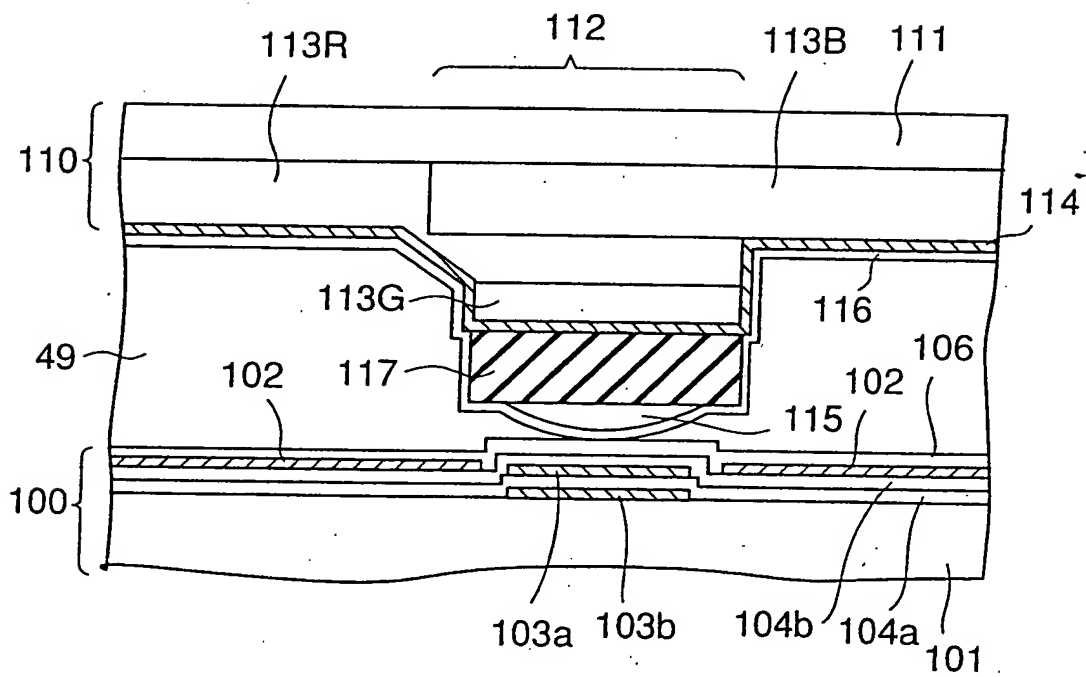


FIG. 20

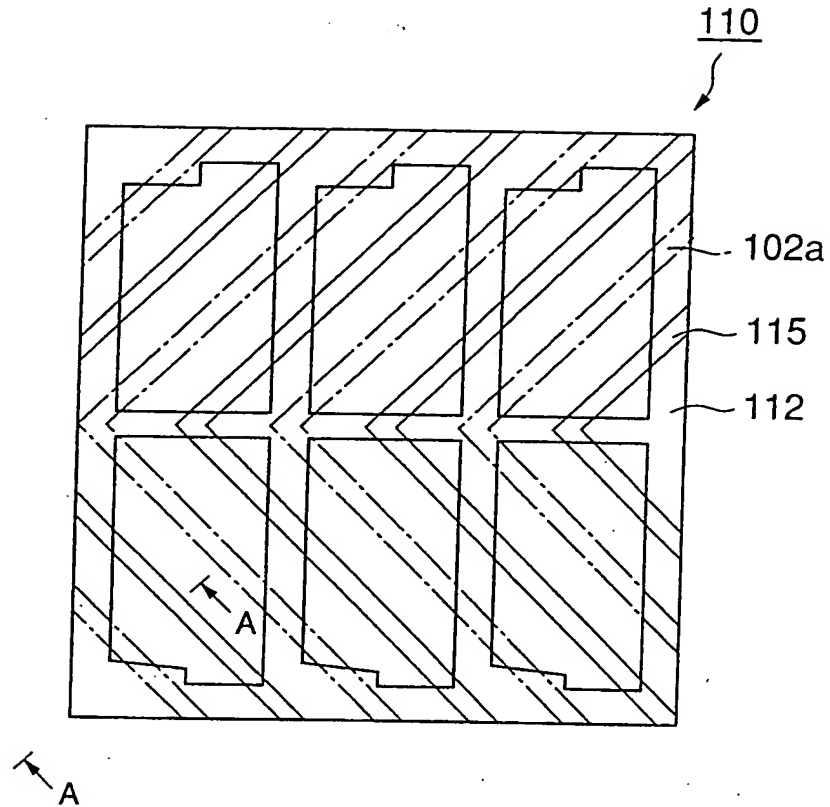


FIG. 21

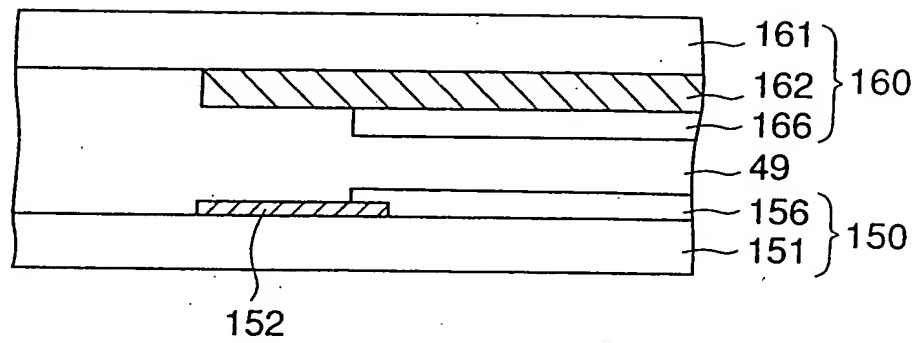


FIG. 22A

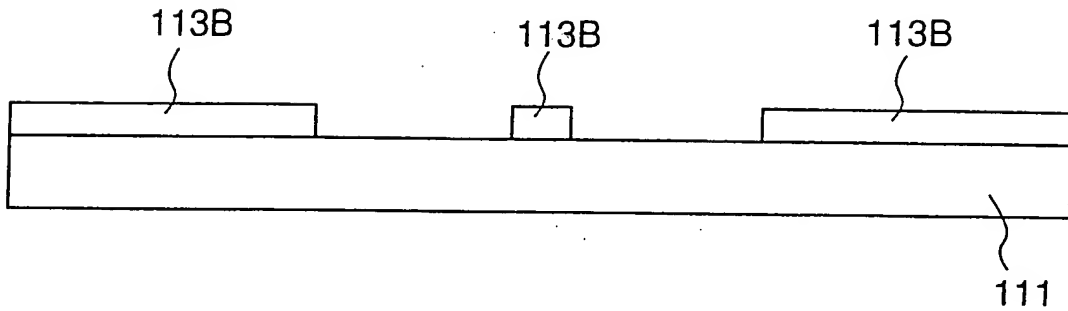


FIG. 22B

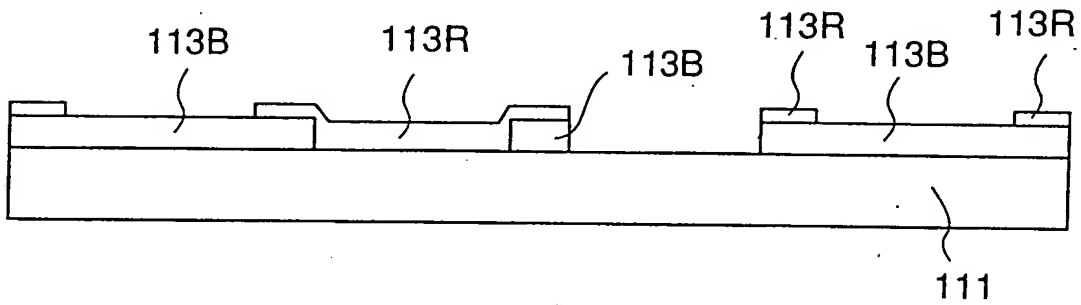


FIG. 22C

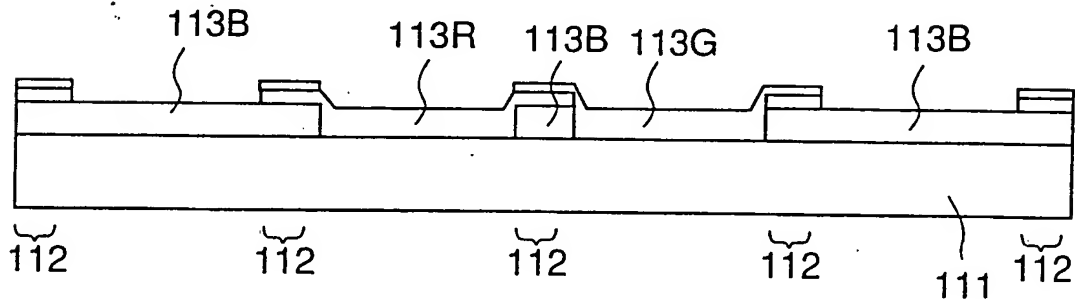


FIG. 22D

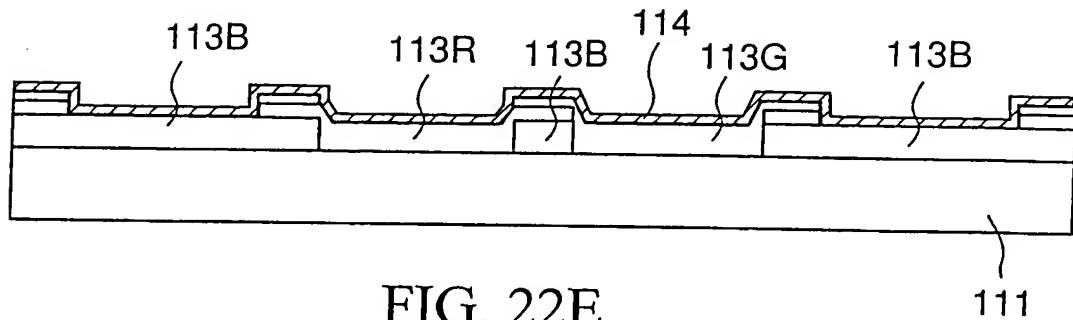


FIG. 22E

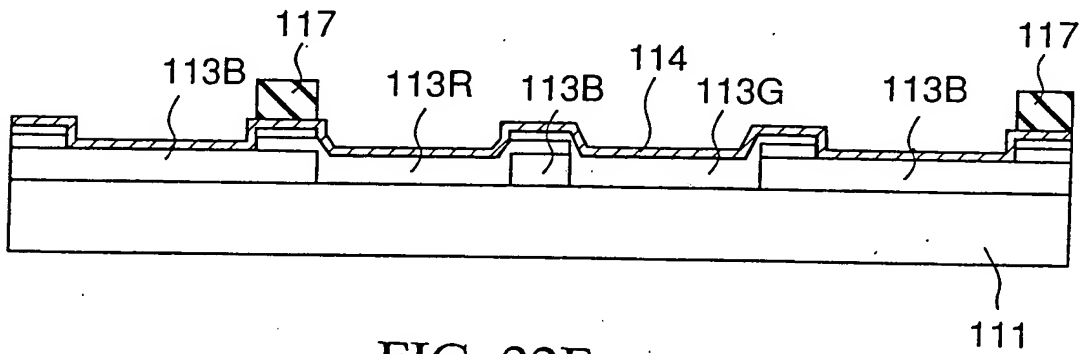


FIG. 22F

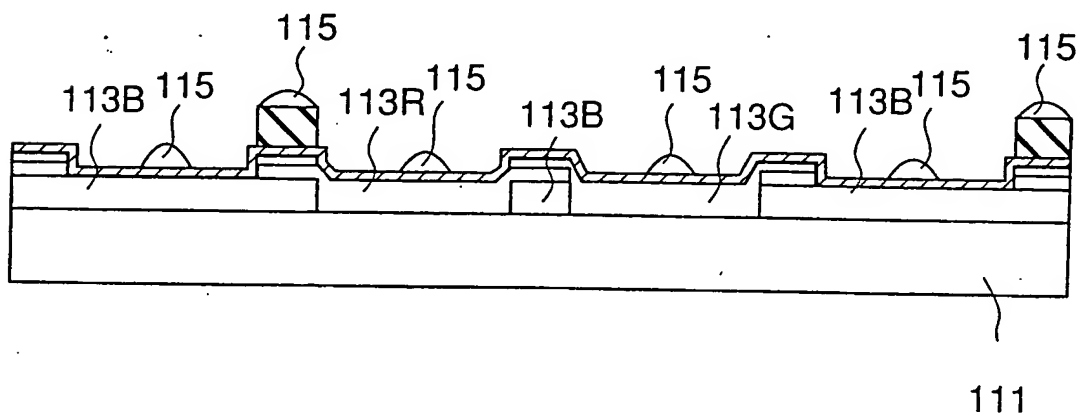


FIG. 23

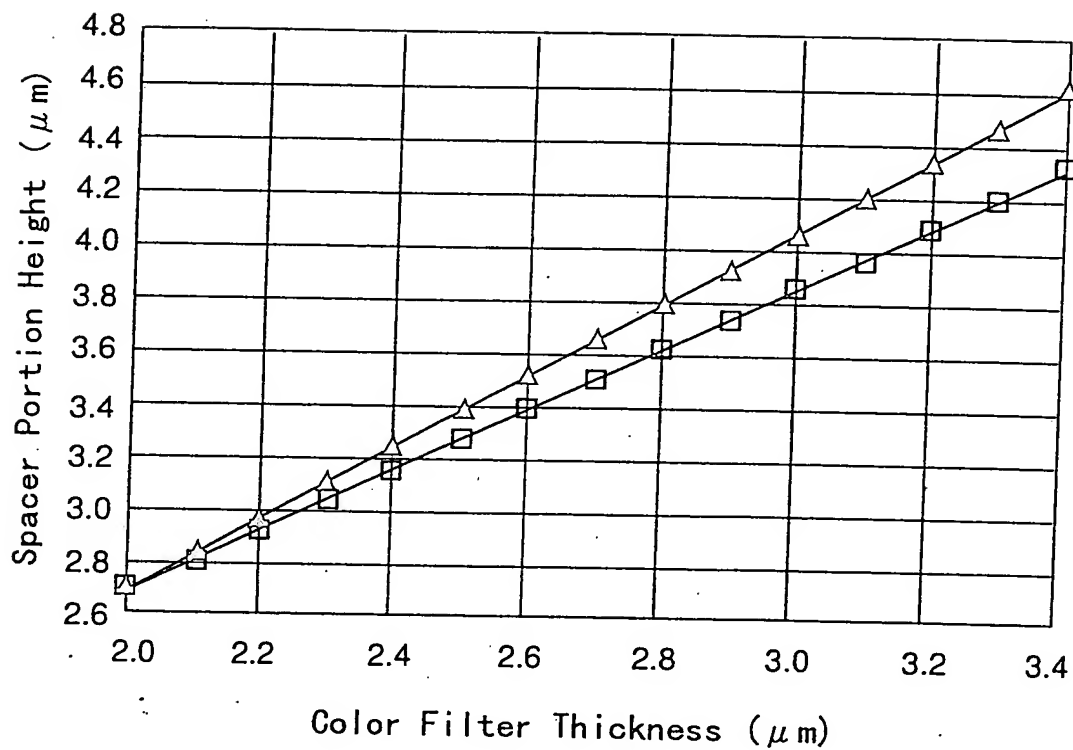




FIG. 24

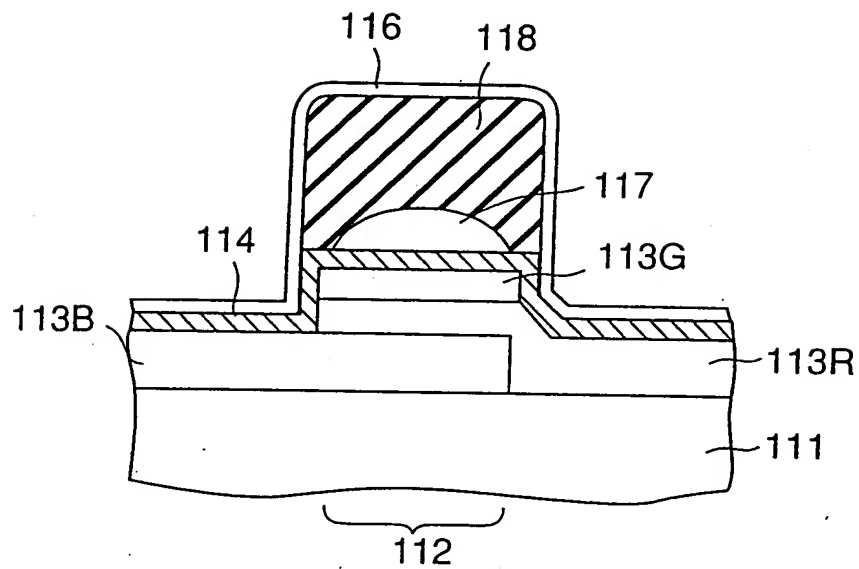


FIG. 25

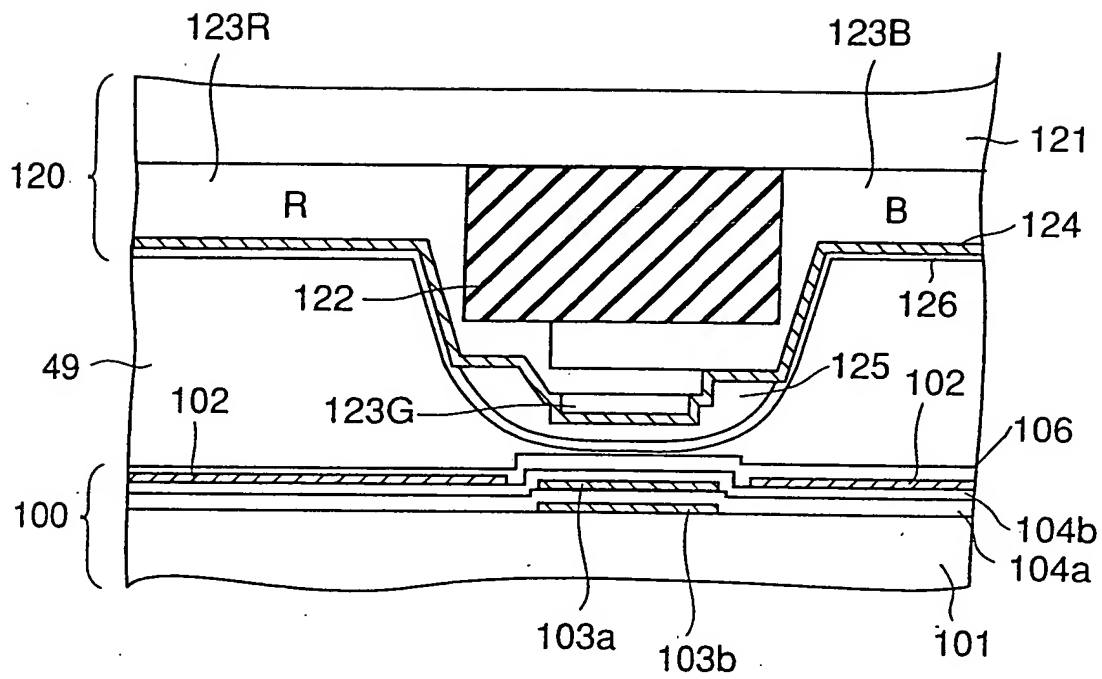




FIG. 27A

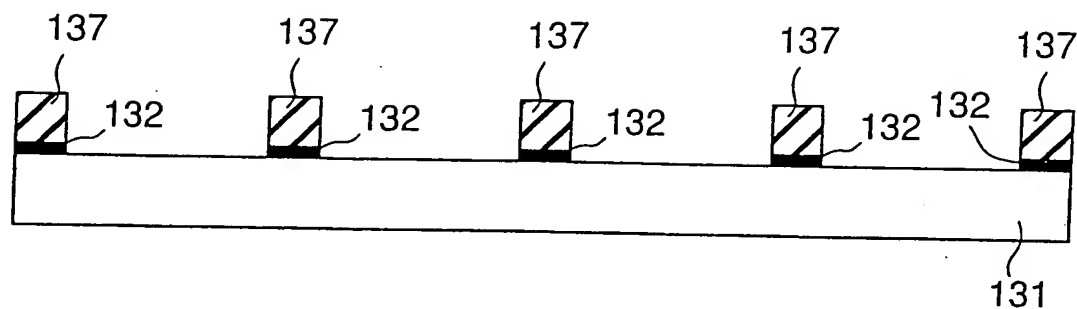


FIG. 27B

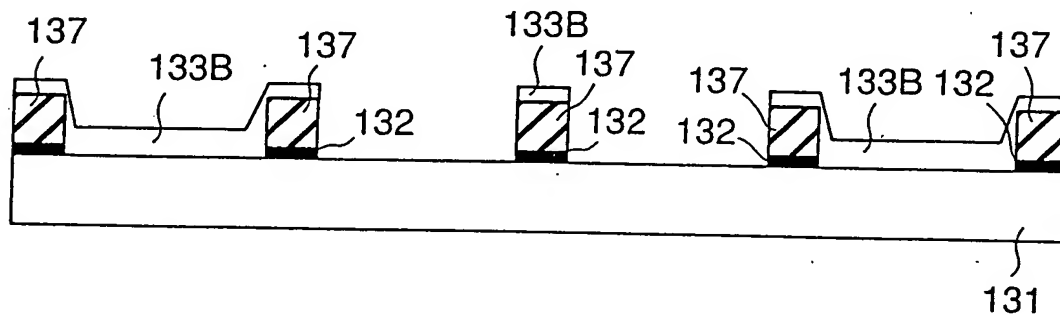


FIG. 27C

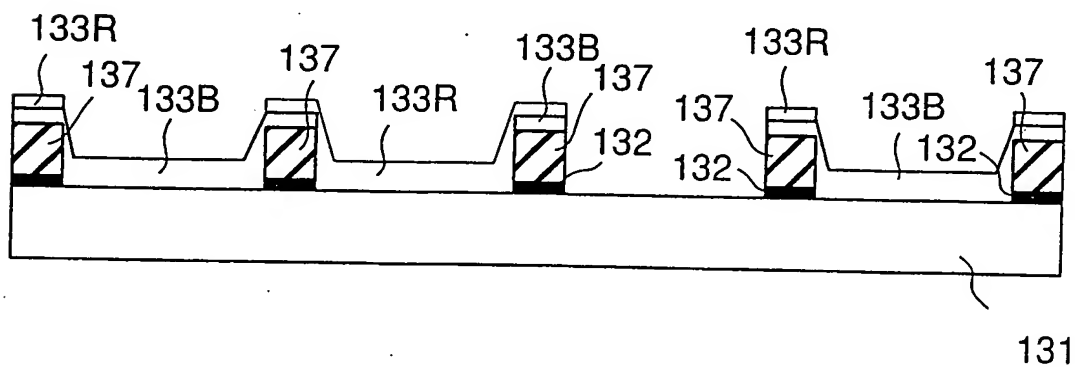


FIG. 27D

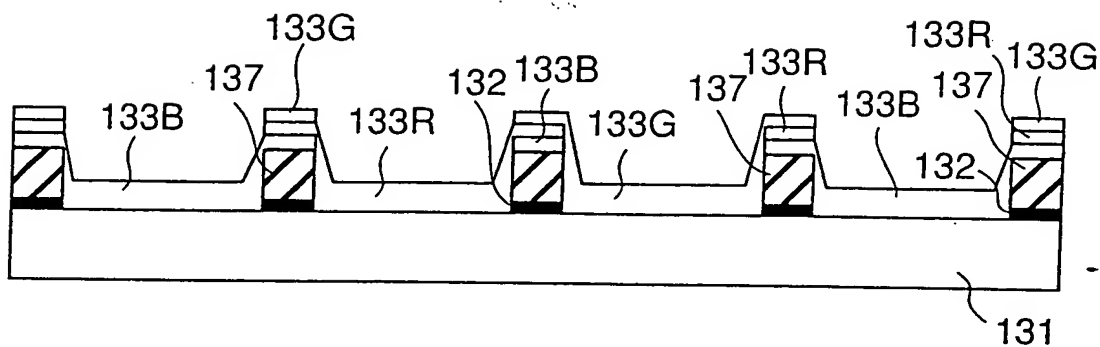


FIG. 27E

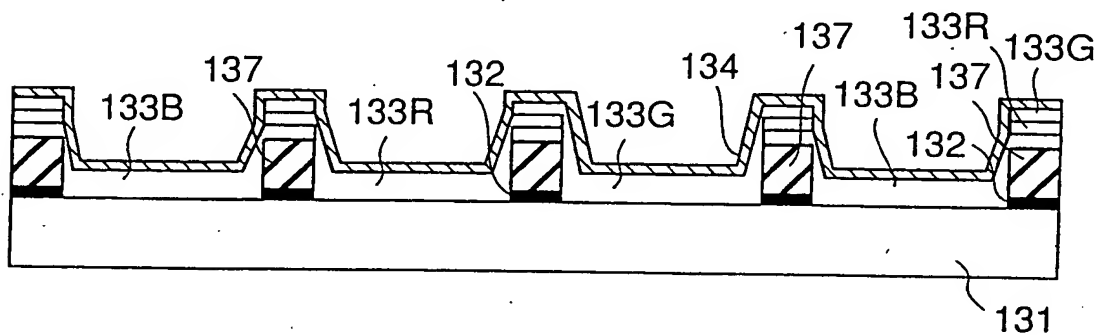


FIG. 27F

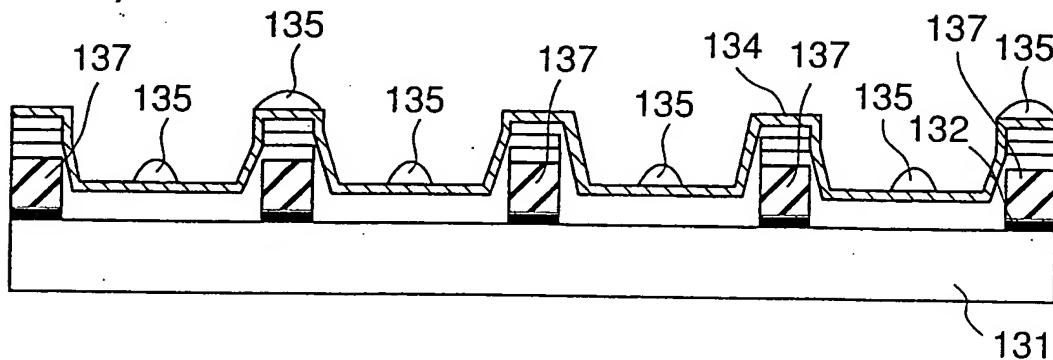
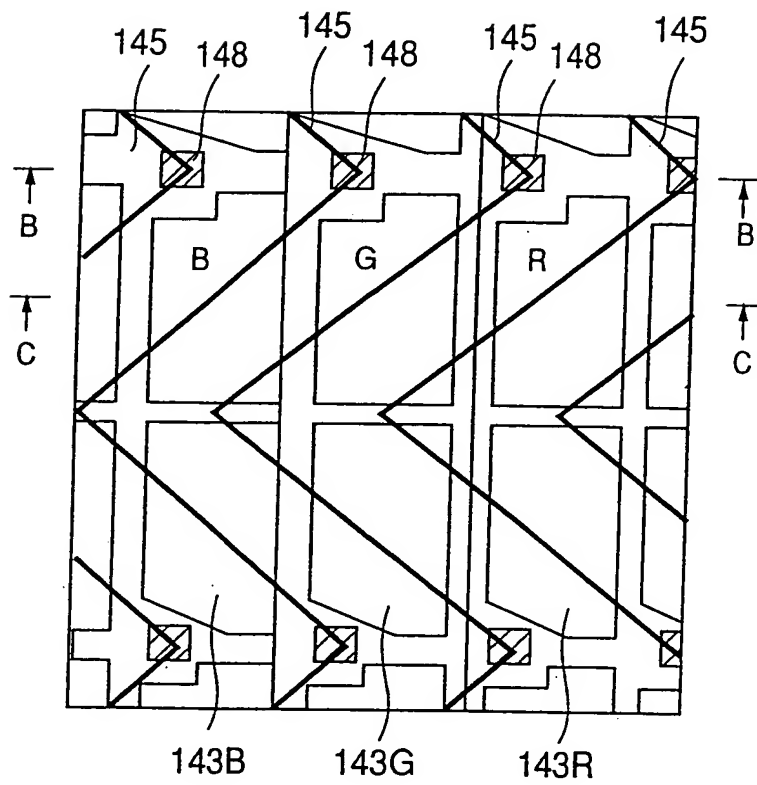


FIG. 28



This cross-sectional view shows a multi-layered substrate. The top layer (100) contains a patterned layer (101) with openings (103a, 103b) and a layer (104a, 104b). Below this is a layer (49) with a patterned layer (106) and a layer (145). The bottom layer (140) contains a patterned layer (143R, 143G, 143B) and a layer (148, 141).

FIG. 30A

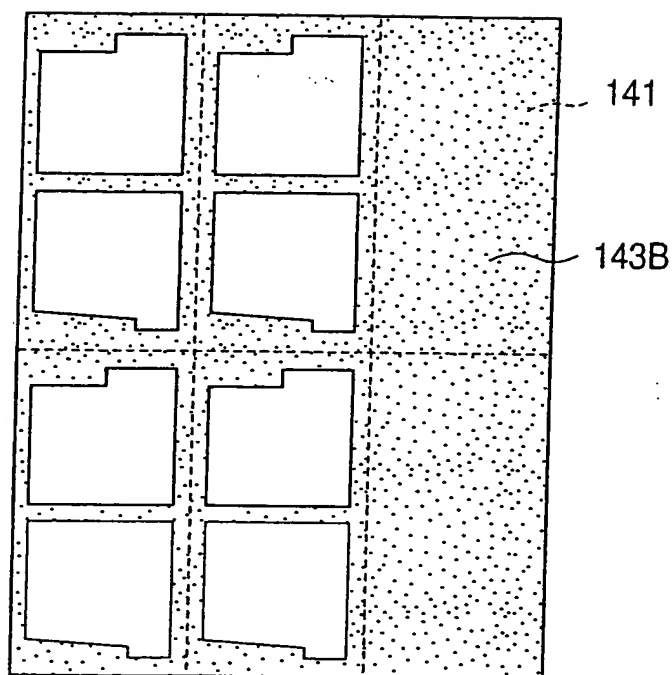


FIG. 30B

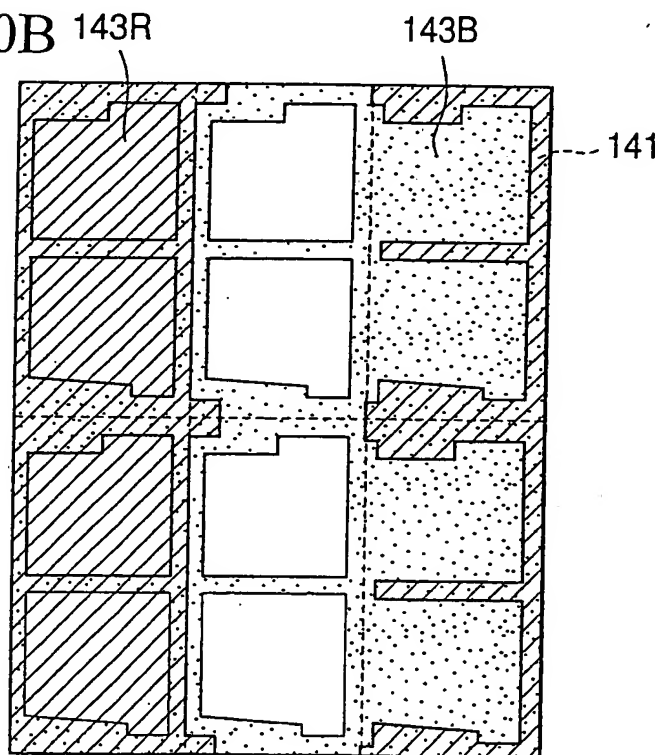




FIG. 30C

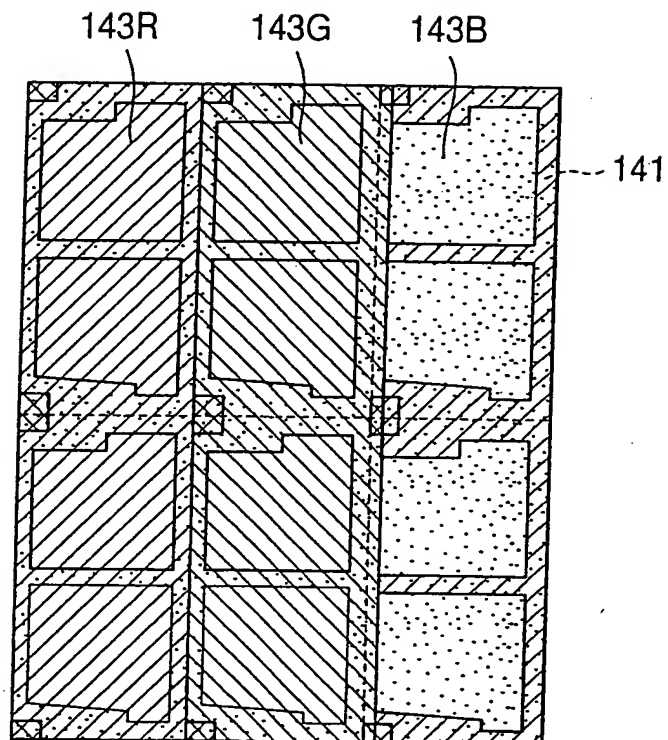


FIG. 31A

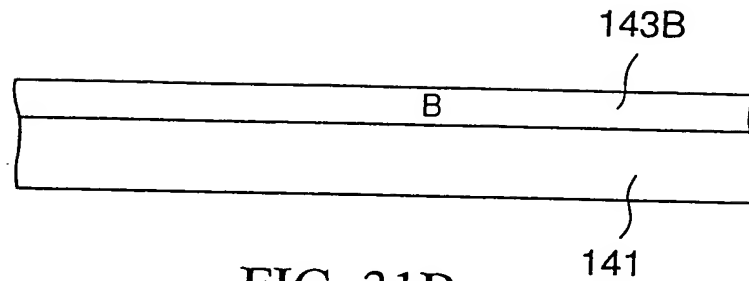


FIG. 31B

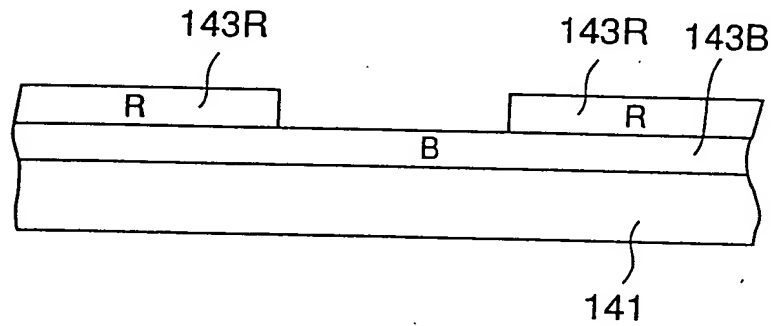


FIG. 31C

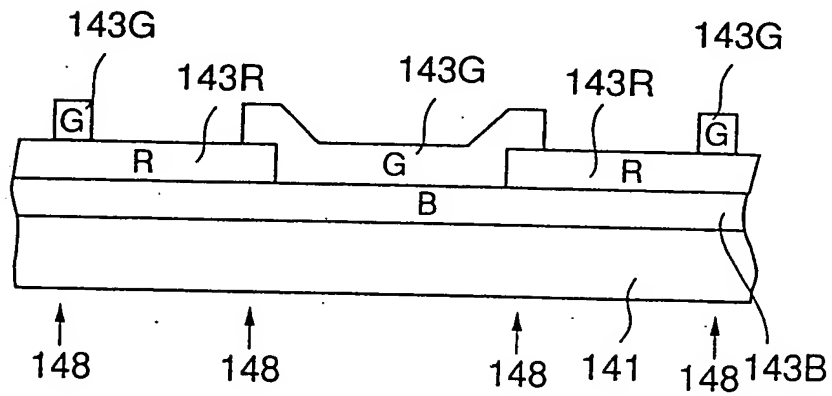
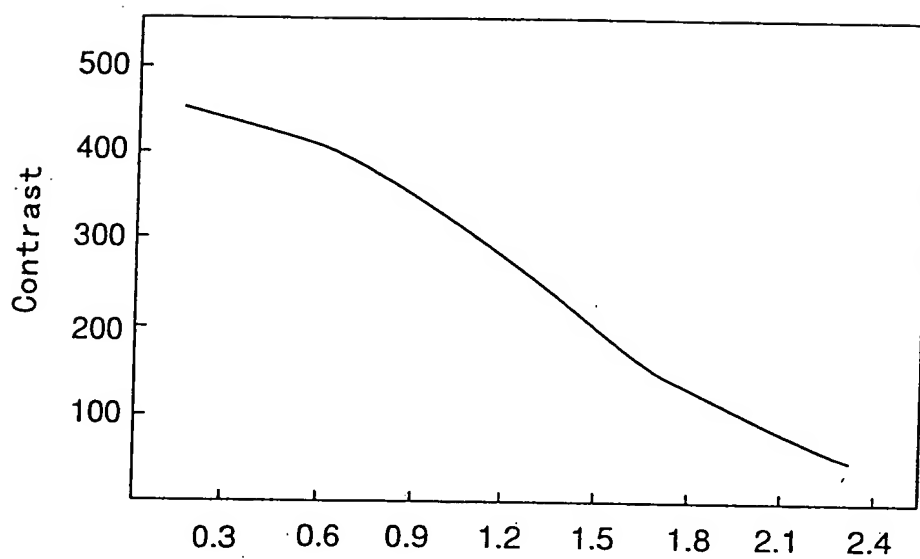


FIG. 32



Pixel Region and Level Difference of the Black Matrix

FIG. 33

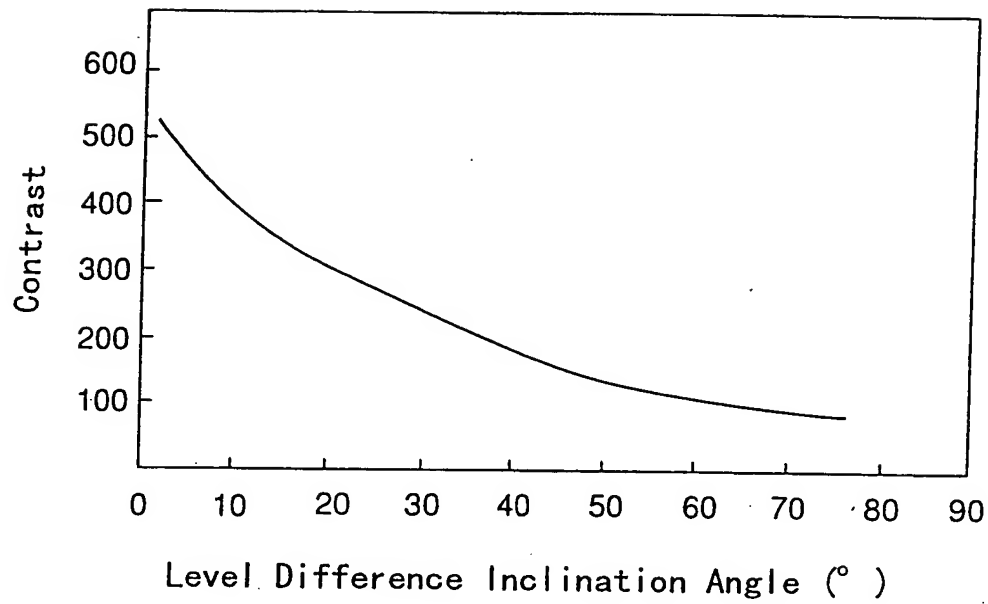


FIG. 34

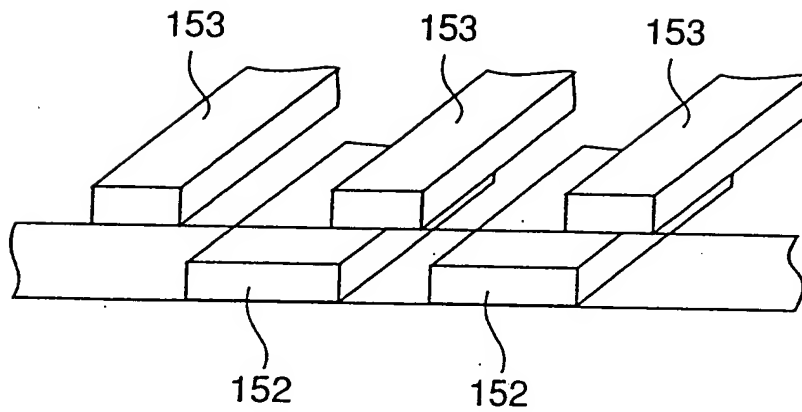


FIG. 35

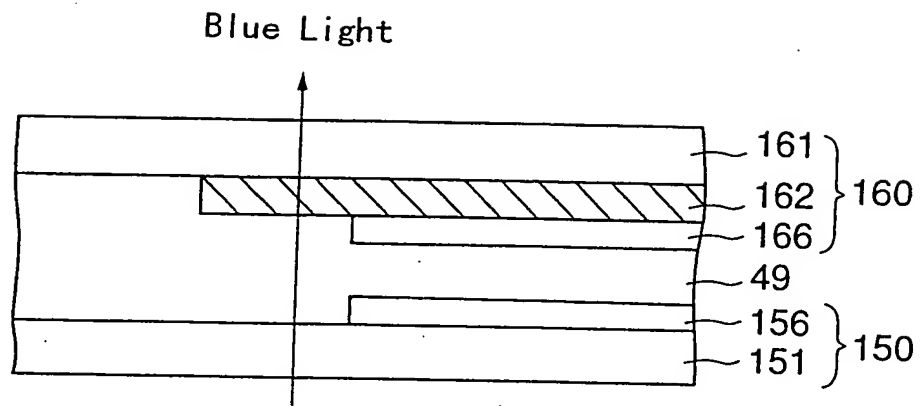


FIG. 36

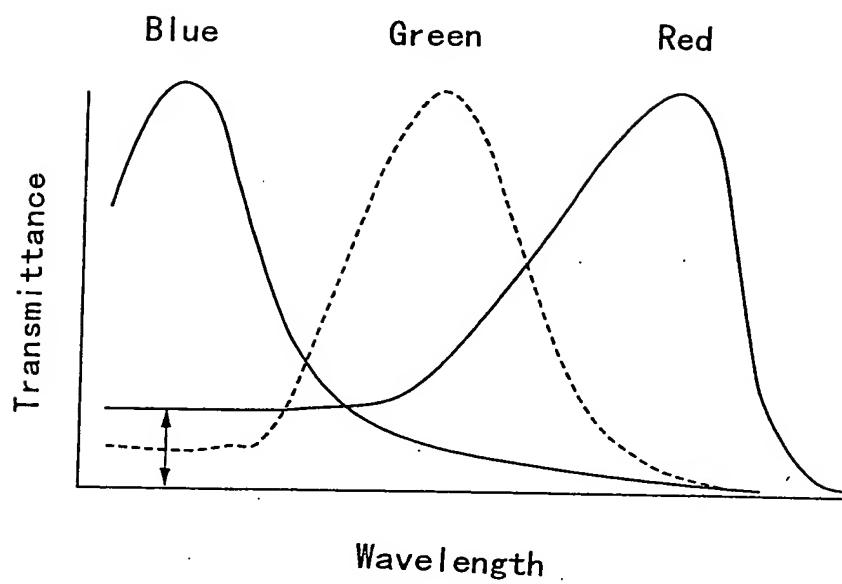


FIG. 37

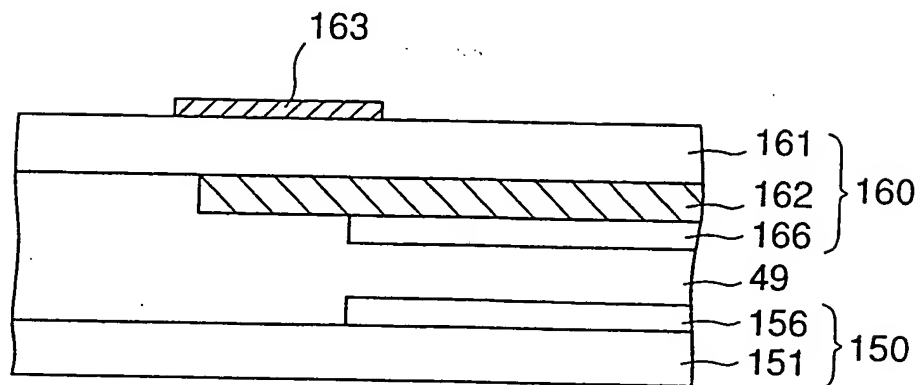


FIG. 38

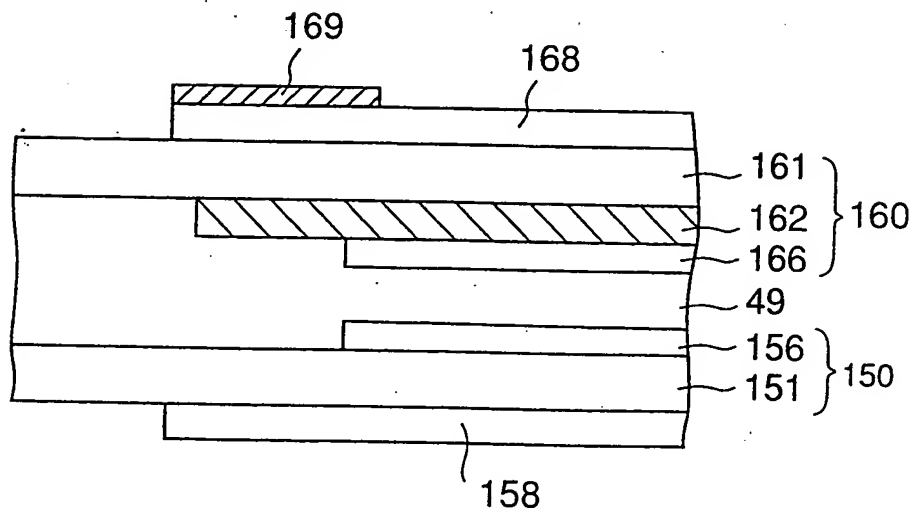




FIG. 39

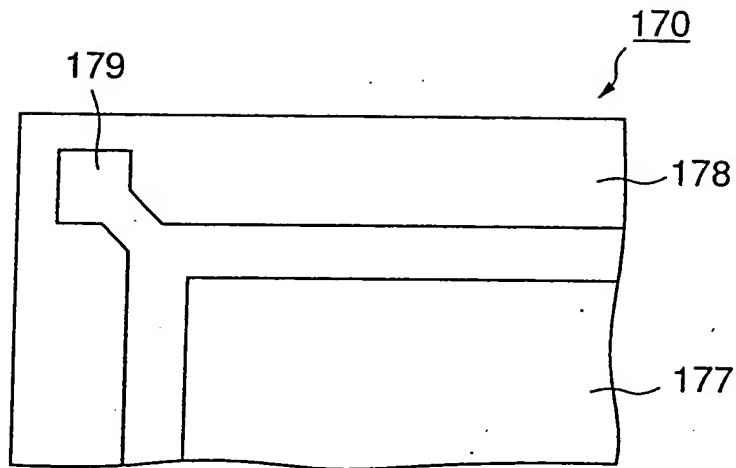


FIG. 40A

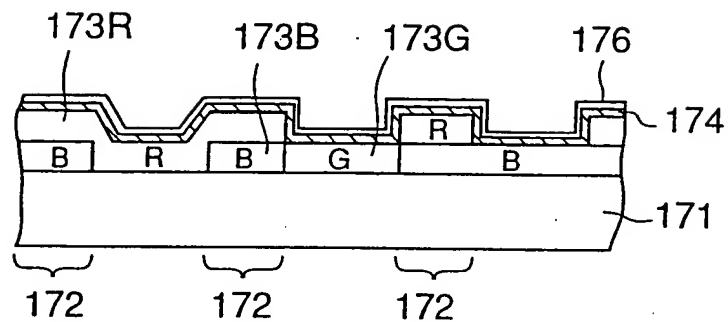


FIG. 40B

